

Message Text

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ACTION ARA-14

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COME-00 DODE-00 EB-08 H-02 INR-10 INT-05 L-03
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FM AMEMBASSY BRASILIA
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INFO USDOE WASHDC
AMEMBASSY BONN
AMEMBASSY BUENOS AIRES
AMEMBASSY THE HAGUE
AMEMBASSY VIENNA
AMCONSUL RIO DE JANEIRO
AMCONSUL SAO PAULO

UNCLAS BRASILIA 3428

VIENNA FOR USIAEA

E.O. 11652: N/A
TAGS: ENRG, BR
SUBJ: NUCLEAR ISSUE -- REPORTS OF TECHNICAL PROGRESS ON JET
NOZZLE URANIUM ENRICHMENT SYSTEM

REF: BRASILIA 3272

1. THE PRESIDENT OF THE BRAZILIAN NATIONAL NUCLEAR ENERGY COMMISSION (CNEN), HERVASIO DE CARVALHO, HAS ANNOUNCED A REDUCTION IN THE ANTICIPATED OPERATING COSTS AND AN INCREASE IN EFFICIENCY OF THE JET NOZZLE URANIUM ENRICHMENT SYSTEM. AT THE SAME TIME, HE HAS ACKNOWLEDGED THAT THERE REMAINS A PROBLEM REGARDING CAPITAL COSTS, WHICH ARE STILL PROHIBITIVE FOR A FULL-SCALE ENRICHMENT PLANT.

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2. ACCORDING TO THE REPORT OF CARVALHO'S REMARKS IN THE 26 APRIL EDITION OF THE JORNAL DO BRASIL, RFG RESEARCHERS WORKING ON REFINEMENTS OF THE JET NOZZLE SYSTEM ADVISED THE BRAZILIAN GOVERNMENT APPROXIMATELY TWO WEEKS AGO THAT BY DIMINISHING THE RADIUS OF CURVATURE OF THE STANDING WALL CENTRIFUGE USED IN THE JET NOZZLE SYSTEM, THEY HAD

INCREASED ITS EFFICIENCY AND THUS REDUCED ITS POWER CONSUMPTION FROM 4000 KWH/SWU TO 2000 KWH/SWU. AT THE SAME TIME, THEY SAID THEY HAD REDUCED THE HUNBER OF STAGES REQUIRED TO REACH 3 PERCENT ENRICHMENT FROM 600 TO 450, THUS REDUCING THE CAPITAL COSTS ASSOCIATED WITH ESTABLISHING A FULL-SCALE ENRICHMENT PLANT BY ABOUT 25 PERCENT.

3. REPEATING A PHRASE FOR WHICH HE HAD BEEN EARLIER CRITICIZED IN THE PRESS (PARAGRAPH 11 OF REFTTEL), CARVALHO SAID THAT THE JET NOZZLE SYSTEM MAY YET TURN OUT TO BE "A WINNING HORSE", BY WHICH HE MEANT, HE EXPLAINED, THAT IT MAY YET TURN OUT TO BE THE CHEAPEST OF THE THREE EXISTING ENRICHMENT SYSTEMS. CARVALHO SAID, HOWEVER, THAT THE ENGINEERING PROBLEMS OF MANUFACTURING THE STATES BY LESS EXPENSIVE PRODUCTION-LINE TECHNIQUES HAD NOT BEEN SOLVED, MAKING A FULL-SCALE ENRICHMENT PLANT STILL PROHIBITIVELY EXPENSIVE. CARVALHO ESTIMATED THAT WITH PRESENT ASSEMBLY TECHNIQUES, A FULL-SCALE ENRICHMENT PLANT CAPABLE OF PROVIDING FOR ALL OF BRAZIL'S ENRICHMENT NEEDS, AS WELL AS FOR EXPORT OF SOME ENRICHMENT SERVICES, WOULD COST ABOUT 7 BILLION DOLLARS. (COMMENT: THE FIGURE SEEMS HIGH, BUT EMBASSY HAS NO BASIS FOR COMPARISON. END COMMENT)
JOHNSON

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